MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2016/2017

MVR 2013 – BEHAVIOURAL MODELLING

(All sections / Groups)

08 OCTOBER 2016
9.00 a.m. - 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 5 pages with 15 Objective Questions and 7 Subjective Questions only.

2. Answer **ALL** questions. All Objective questions carry equal Marks and the distribution of the marks for each Subjective questions is given.

3. Please write all your answers in the Answer Booklet provided.

Section A
Objective Questions

Behavioral Modelling Introduction

1. In Unity Editor, which window contains a **List** of every GameObject in the current Scene?

A. Hierarchy Window
B. Scene View
C. Project Window
D. Inspector Window

2. How many **Primitive Objects** that can be directly created within Unity?

A. 5
B. 6
C. 4
D. 3

3. A GameObject may have many components. How does one STORE a GameObject complete with its components and properties for multiple usages?

A. copying and pasting its individual components
B. instantiate the GameObject
C. create a Prefab asset
D. create a Scripted GameObject

4. Picture a door to be used in a virtual environment. If the door is to rotate, which **Axis** is it to be rotated on?

A. W
B. Z
C. X
D. Y

5. Which one of these virtual axes represents the mouse's **Right Click**?

A. mouse 3
B. mouse 2
C. mouse 1
D. mouse 0

Continued .....

Scripting C#

6. Having an application requiring MULTIPLAYER gameplay, is **FixedUpdate** the best function to run every second all the time? And WHY?

A. Yes. Because FixedUpdate runs in a fixed location
B. Yes. Because FixedUpdate runs at a fixed interval across platforms
C. No. Because the Update function can run at every second
D. No. Because FixedUpdate does not run at fixed intervals

7. Your scene has a GameObject has a DISABLED Script Component. Which of these functions would run when the APPLICATION STARTS?

A. Awake
B. Start
C. Update
D. OnStart

8. Which of the following shows the CORRECT method on writing the function **Wait for Seconds**?

A. yield return WaitForSeconds(2);
B. yield return new WaitForSeconds(2);
C. yield return new waitForSeconds(2);
D. yield return new WaitForSeconds(2;

9. Which one of these lines will cause an **Error** that will make it unable to PLAY?

A. void start () {}
B. private GameObject gameObjectGO;
C. getComponent<MyScript>();
D. void Update () {}

10. Which of these methods PAUSES gameplay while playing in the Editor?

A. Print
B. Debug.Log
C. Debug.LogFormat
D. Debug.LogError

11. Which of these are the correct way to write the **GetComponent** function in order to get the Animation Component?

A. GetComponent(Animation);
B. GetComponent<Animation>;
C. GetComponent<Animation>();
D. GetComponent<Animation()>;

Continued .....

12. Which of these situations EXEMPLIFIES the usage of the function **OnTriggerEnter**?

A. Cube rotates as long as the Player stays within proximity
B. Door opens every time the Player comes within proximity
C. Window closes when the Player moves away from the window
D. Ball keeps bouncing when the Player is close to it

13. Describe what happens to a game object when applying Rigid Body that has **'Is Kinematic'** turned ON?

A. game object will stay still and unaffected by any other game object
B. game object will not collide with any other game object
C. game object will rotate by itself
D. game object will not be affected by gravity but can be affected by other game object

14. What kind of variable that is ACCESSIBLE throughout the script but is UNSEEN in the inspector window in Unity?

A. Hidden
B. Private
C. Public
D. Local

15. When does the function **OnDestroy()** runs in the game?

A. When a GameObject has been hidden
B. When a GameObject has been deactivated
C. When a GameObject has been deleted
D. When a GameObject has been moved

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Section B
Subjective Questions

1. What is the alternate way of writing **Vector3.Left**?

(1 Mark)

2. Define **Obstacles** in a game.

(1 Mark)

3. Describe the function of a **User Interface (UI)** in a virtual application.

(1 Mark)

4. Explain the **Process** of creating a **3rd Person Controller Script**

(3 Marks)

5. Explain the **Process** of creating a **Score System** for a game where the players collect a certain number of items to win.

(5 Marks)

6. Explain the difference between a **NavMesh** and a **NavMeshAgent**, and give **2 Examples** for each.

(5 Marks)

7. Write down the **Function Scripts** for the following actions:-
   i) Instantiate a GameObject at World Zero by its default orientation.

   (1 Mark)

   ii) Print on the console the line 'Success Achieved' when the variable 'Success' is true.

   (2 Marks)

   iii) Move a GameObject to its front 5 units per second for as long as we're holding the 'w' button.

   (3 Marks)

   iv) Play a GameObjects Animation for 2 seconds before Insantiates an explosion while deactivating the physical outlook of the GameObject and destroys it a second afterwards.

   (5 Marks)

   v) Have a GameObject that can be triggered when any GameObject that has the tag "Player" enters it, adds 1 to a variable called 'Score', and if 'Score' reaches 10, turn on an animated UI that says 'You Win', while deactivating the Character Controller at the same time.

   (8 Marks)

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